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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,938	05/23/2000	Andrew D. Dingsor	RSW9-2000-0036-US1	4490

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EXAMINER

NGUYEN, THANH T

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 01/20/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/575,938

Applicant(s)

DINGSOR ET AL.

Examiner

Tammy T Nguyen

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:



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Detailed Office Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 16, 2003 has been entered.

2. Claims 31-33 are presented for examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3, 13, 23 recites the limitation "...said **connection**..., ...said **number**..., ...said **number**" in the third and fourth limitations in claims 3, 13, 23. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 11, 12, 21, 22, 32, 31 and 33 have similar limitations as claims 1, 2, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ian Robert Govett., (hereinafter Govett) U.S. Patent No. 5,761,507 in view of Najork et al., (hereinafter Najork) U.S. Patent No. 6,351,755).

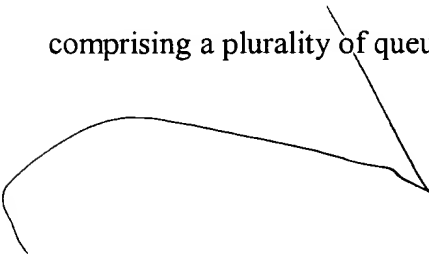
7. As to claim 1, Govett teaches the invention as claimed, including a computer program product for enhancing performance of a multithreaded application, said computer program product embodied on a computer-readable medium and comprising:

computer-readable program code means for executing a plurality of worker threads (col.13, lines 20-44, col.10, lines 25-49, col.12, lines 19-31, and col.10, line 62 to col.11, line 24);

computer-readable program code means for receiving onto an incoming queue a plurality of incoming client requests for connections (col.7, lines 9-50);

computer-readable program code means for servicing, by said plurality of worker threads, said client requests by retrieving selected ones of said client requests from said wide queue (col.7, lines 29-67, and col.10, lines 24-37).

However, Govett fail to explicitly teach a wide queue wherein said wide queue comprising a plurality of queues. Sharma teaches a wide queue wherein said wide queue comprising a plurality of queues (Fig.9, Frontier wide queue and plurality of queues). At time



the invention was made, it would be obvious to one of ordinary skill in the art to combine the teaching of Govett with the teaching of Sharma in order to store such information would be dynamically determined, and the manner in which that information is used would be dynamically determined, without having to customize the code for each application.

8. As to claim 2, Govett teaches the invention as claimed, wherein said computer-readable program code means for transferring further comprises:

computer-readable program code means for placing each of said received client requests on a selected one of said plurality of queues using a First-in, First-Out (FIFO) strategy, wherein said selected one of said plurality of queue is selected using a round-robin approach (col.7, line 51 to col.8, line 37);

9. As to claim 31, Govett teaches the invention as claim, wherein computer-readable program code means for returning said retrieved selected ones of said client requests to said wide queue using said FIFO strategy and said round-robin approach upon completion of said computer-readable program code means for servicing (col. 12, lines 19-30, col.7, lines 29-50, and col.7, line 51 to col.8, line 37).

10. Claims 11, 12, and 21, 22, 32, 33 have similar limitations as claims 1, 2, and 31; Therefore, they are rejected under the same rationale.

11. Claims 3-10, 13-20, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ian Robert Govett., (hereinafter Govett) U.S. Patent No. 5,761,508 Najork et al., (hereinafter Najork) U.S. Patent No. 6,351,755 in view of Sharma et al., (hereinafter Sharma) U.S. Patent No. 6,182,109).

12. As to claim 3, Govett teaches the invention as claimed, including a computer program

product for enhancing performance of a multithreaded application, said computer program product embodied on a computer-readable medium and comprising:

computer-readable program code means for executing a plurality of worker threads (col.13, lines 20-44, col.10, lines 25-49, col.12, lines 19-31, and col.10, line 62 to col.11, line 24);

computer-readable program code means for receiving a plurality of incoming client request onto a queue, wherein each of said client requests is for a connection to a host(col.7, lines 9-50);

computer readable program code means for retrieving, by an individual one of said worker threads, a selected one of said client requests from said queue (Fig.4, 460, and col.6, lines 52-67);

However Govett and Najork do not explicitly teach determining a number of connections to said host to which said connection is requested in said selected client request, wherein said number are those which are currently assigned to one or more of said worker threads, client request is less than upper limit. Sharma teaches determining a number of connections to said host to which said connection is requested in said selected client request, wherein said number are those which are currently assigned to one or more of said worker threads is less than upper limit (col.22, lines 49-60 and col.24, lines 3-15). At the time the invention was made would have been obvious to one of ordinary skill in the art to combine the teachings of Govett, Najork and Sharma in order to avoid an overload situation.

13. As to claim 4, Govett does not teach the invention as claimed, wherein said upper limit is a system-wide value. However, Sharma teaches the upper limit is a system wide value (col.22, lines 49-60 and col.24, lines 3-15). It would have been obvious to one of ordinary skill in the

Data Processing art at the time of the invention to combine the teachings of Govett, Najork and Sharma to have a system-wide value because it would utilization and convenient communications system that offers additional services, such as message routing, resource management, and conversion facilities, for computers communicating at different speeds.

14. As to claim 5, Govett teaches the invention as claimed, wherein said upper limit is a value specific to said host to which said connection is requested (col.12, lines 11-50).

15. As to claim 6, Govett teaches the invention as claim, wherein said value is dynamically computed, and further comprising: computer-readable program code means for executing a supervisor thread (col.6, lines 10-50, and col.9, line 50 to col.10, line 7);

computer-readable code means for monitoring, by said supervisor thread, whether connections to each of said hosts succeed or fail; and computer-readable program code means for decrementing said value when said connections to said host fail (col.10, lines 37-62, and col.12, lines 19-50).

16. As to claim 7, Govett teaches the invention as claimed, further comprising:

computer-readable code means for incrementing said value when said connections to said host succeed (col.10, lines 8-62).

17. As to claim 8, Govett teaches the invention as claimed, wherein said computer-readable program code means for monitoring further comprise:

computer-readable program code means for setting, by each of said worker threads, and thread time stamp when said worker thread performs active work (col.14, lines 30-40);

computer-readable program code means for comparing, by said supervisor thread, said thread time stamp for each of said worker threads to a system time, thereby computing an elapsed time for said worker thread (col.6, lines 9-52); and

computer-program code means for deactivating said worker thread if said elapsed time exceeds a maximum allowable time (col.6, lines 10-36).

18. As to claim 9, Govett teaches the invention as claimed, further comprising:

computer-readable program code means for providing information for each of said hosts, said information comprising an address for said host and a plurality of in-use flags (col.7, lines 9-50);

computer-readable program code means for setting a selected one of said in-use flags when a particular worker thread is processing work on said connection to a particular host, wherein said selected one of said in-use flags is associated with said particular worker thread (col.7, lines 9-50); and

computer-readable program code means for resetting said selected one of said in-use flags when said particular worker thread stops processing work on said connection to said particular host (col.7, lines 9-50); and

wherein said computer-readable program code means for determining said number of currently-assigned connection further comprises computer-readable program code means for counting how many said in-use flags are set (col.3, lines 1-15).

19. As to claim 10, Govett teaches the invention as claimed, wherein said queue is a wide queue comprised of a plurality of First-In, First-Out (FIFO) queues (col.7, line 29-50).

20. Claims 13-20, and 23-30 have similar limitations as claims 3-10; therefore, they are rejected under the same rationale.

21. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Tammy T. Nguyen** who may be reached via telephone at **(703) 305-7982**. The examiner can normally be reached Monday through Friday between 8:00 a.m. and 4:30 p.m. eastern standard time. If you need to send the Examiner, a facsimile transmission regarding this instant application, please send it to **(703) 872-9306**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, **David Wiley**, may be reached at **(703) 308-5221**.

TTN

January 8, 2004



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